



Mobile/VR/AR WG/RG/CG 1st Meeting

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Meeting Agenda

Introduction

Overview

Evolution of Robotics

Enhanced Human-Machine Interaction

Healthcare Applications

Electronics Industry Advancements

Engineering Innovations

Education and Training Benefits

Industrial Automation Advantages

Telepresence and Remote Work

Safety and Risk Reduction

Accessibility and Inclusivity

Future Trends and Opportunities



Introduction

- Name
- Background
- Current Role
- Personal Interests



Overview

- Mobile, AR, and VR technologies have revolutionized robotics by enhancing human-machine interaction and expanding possibilities.
- These technologies bridge the gap between physical and digital realms, offering immersive experiences and real-time data visualization in various fields like healthcare, electronics, and engineering.



Evolution of Robotics

- Robotics has evolved from conventional machinery to intelligent systems capable of autonomous decision-making.
- Mobile, AR, and VR technologies have accelerated this evolution by providing tools for remote operation, simulation, and training.



Enhanced Human-Machine Interaction

- Mobile devices enable users to control robots remotely, facilitating tasks in hazardous or inaccessible environments.
- AR and VR technologies offer immersive interfaces, allowing users to visualize and interact with virtual objects in real-world settings, enhancing collaboration and training.

Healthcare Applications

- In healthcare, mobile robots equipped with AR and VR interfaces assist in surgeries by providing real-time data visualization and guidance to surgeons.
- AR technology enhances medical training by simulating surgical procedures and anatomical structures, improving the skills of healthcare professionals.

Electronics Industry Advancements

- Mobile-controlled robots streamline manufacturing processes in the electronics industry, increasing efficiency and precision.
- AR-enabled maintenance and repair procedures reduce downtime by providing technicians with step-by-step instructions and real-time data overlays.



Engineering Innovations

- AR and VR technologies revolutionize engineering design and prototyping by offering virtual simulations and 3D modeling tools.
- Mobile-controlled robotic systems aid in construction projects by performing tasks with greater accuracy and safety under human supervision.

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Education and Training Benefits

- Mobile applications combined with AR and VR technologies provide immersive learning experiences, enhancing student engagement and knowledge retention.
- Virtual simulations offer a safe environment for training personnel in high-risk scenarios, such as emergency response and military operations.



Industrial Automation Advantages

- Mobile-controlled robotic arms equipped with AR interfaces optimize warehouse operations by facilitating inventory management and order fulfillment.
- VR-based training programs for industrial robots reduce training costs and minimize the risk of accidents in manufacturing environments.

Telepresence and Remote Work

- Mobile-controlled telepresence robots allow remote workers to participate in meetings and interact with colleagues, fostering collaboration and inclusivity.
- AR and VR technologies enable remote technicians to troubleshoot and repair machinery by overlaying digital instructions and diagnostics onto physical equipment.

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Safety and Risk Reduction

- Mobile-controlled robots equipped with AR and VR interfaces enhance workplace safety by performing hazardous tasks in place of humans.
- VR simulations provide training for emergency responders, helping them develop skills and decision-making abilities in realistic scenarios without risking lives.

Accessibility and Inclusivity

- Mobile, AR, and VR technologies make robotics more accessible to people with disabilities by offering customizable interfaces and adaptive controls.
- VR experiences enable individuals with mobility impairments to explore virtual environments and participate in activities they may not access physically.




Future Trends and Opportunities

- The integration of mobile, AR, and VR technologies with robotics will continue to drive innovation across various industries, unlocking new possibilities for automation and human-machine interaction.
- Advancements in artificial intelligence and sensor technology will further enhance the capabilities of mobile-controlled robots, making them indispensable in fields ranging from healthcare to entertainment.

Mobile/AR/VR Robots Control

- Controlling Robots/Multi-Robotics
- Systems for individuals Interact



Profile: Ronaldson Bellande

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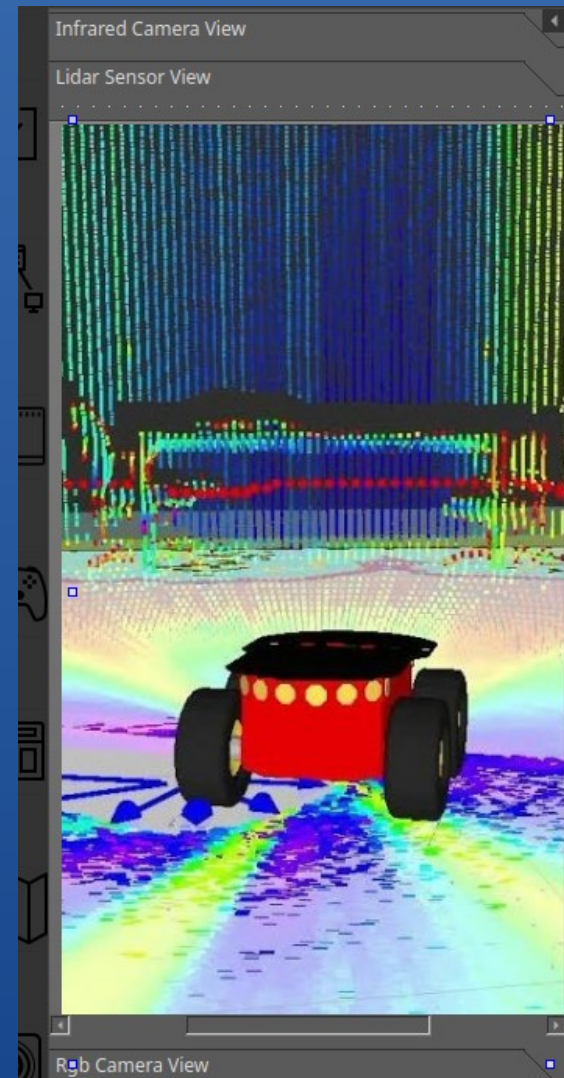
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Mobile/AR/VR Robot Visualization

- Visualizing Robot Sensors
- Simulation View
- Real-World View
- Camera View



• Collaboration Opportunities & Next Steps & Networking & Resources

GitHub Working Group Repository Information:

<https://github.com/Application-UI-UX/BAI-XRI-Mobile-AR-VR-Community-Group>

GitHub Organization: <https://github.com/Application-UI-UX>

Discord Group: <https://discord.gg/KBwqcPdx2H>

Google Group: <https://groups.google.com/g/mobilevrar-application-uiux-community-group>

Email Group: mobilevrar-application-uiux-community-group@googlegroups.com

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